

CLAIMS

1. An electric power steering apparatus for converting the rotation of a steering assist motor into the movement of a steering shaft in the axial direction thereof in accordance with steering operation by using a ball screw mechanism wherein a female thread groove formed around an inner circumference of a rotating cylinder rotated around the axis thereof by said steering assist motor and a male thread groove formed around an outer circumference of said steering shaft are screwed with each other via a plurality of balls, wherein

portions of cross-section, where said female thread groove and said male thread groove contact with said balls, are formed in a circular arc shape, respectively, and

a curvature of said female thread groove is smaller than that of said male thread groove.

2. The electric power steering apparatus as set forth in claim 1, wherein

a curvature radius of said female thread groove is in the range of 53.5 to 85% of the diameter of said ball, and

a curvature radius of said male thread groove is in the range of 52.5 to 75% of the diameter of said ball.